F-500 ENCAPSULATOR TECHNOLOGY

Insurance Services Office (ISO)
FSRS Equivalency List
Credit Recognition

PRODUCT APPLICATION BULLETIN

After Years of Comparisons, F-500 Encapsulator Agent is Declared the Winner!

F-500 Encapsulator Agent has been used successfully to extinguish tens of thousands of fires around the world. In most cases, the firefighters know and trust F-500 EA to do the job. Occasionally, we come across situations where F-500 EA goes head to head with foam or water, with striking results. It's easy for our competitors to say they are as good as F-500 EA, but in a direct comparison, F-500 EA wins every time.

In terms of saving lives and reducing the risk to firefighters, the faster you can extinguish a fire, the better. When it comes down to economics, there's a list of reasons why F-500 EA should be the firefighting agent of choice. First, with faster extinguishment, less agent is used. Faster knockdown means less damage to structures. Much less F-500 EA is used compared to foam, especially in the case of Class B and three-dimensional fires. With less agent, you use less water, meaning less run-off, less need for dykes and less potential for fines. In addition, F-500 EA works on Class A, Class B nonpolar and Class B polar solvents and Class D fires, so there's no need to inventory three different foams and powders.

F-500 EA drastically cools a fire - remove the heat; remove the fire. An example of this amazing cooling ability is applying F-500 EA directly on burning titanium or magnesium. Foam or water will explode if applied as the water turns into hydrogen and oxygen, but only F-500 EA will go to work cooling the metal. Applying powder does nothing to cool the metal, so reignition occurs.

F-500 EA also works on three-dimensional fires, unlike foams, which need to form a blanket and smother the fire. As we know, almost every fire is three-dimensional. Even NFPA 11, Annex A.1.1 states, "Foam is not suitable for three-dimensional flowing liquid fuel fires or for gas fires." F-500 EA also encapsulates Class B fuels, rendering them nonflammable and nonignitable. In fact, in the case of a Class B fuel spill, after extinguishment, the resulting F-500 EA and encapsulated fuel can be left to evaporate, if allowed by local regulations, or vacuumed and hauled away as a safe, nonflammable solution.

The list on the back includes real world comparisons where foam or water was not able to do the job and serious test comparisons where companies or fire departments wanted to document for themselves before committing to this unique product. The successes shown on the back can be attributed to F-500 EA's ability to cool, encapsulate and fight three-dimensional fires.

F-500 Encapsulator Agent Outperforms Other Agents

Time after time, around the world, F-500 Encapsulator Agent shows its incredible versatility against multiple fire hazards. Below are real world examples where other agents failed and F-500 EA succeeded, as well as situations where F-500 EA simply worked faster. Faster extinguishment reduces risk and means less agent, water and manpower are wasted.

Event and Location	Fuel	Time to Extinguish		Comments
		F-500 EA	Other Agent	
Rickmers (cargo ship) South China Sea	Magnesium, chemicals, tires	5 hours	AFFF - 80 hours - ineffective	Twelve 5-gallon pails of F-500 EA were used
Tire Fire Gila River, AZ	One million tires	One day	Water was applied for 5 days without success	Fire spread while water applications failed
Continental Flight 3407 Clearance Center, NY	Jet fuel, aluminum, natural gas	20 minutes	No foam was used	Fire was extinguished before foam truck arrived
Transformer Fire Queens, NY	Mineral oil, hot metal	2 minutes	AFFF foam and Purple K failed	Foams are ineffective on 3D fires and powders don't remove the heat, resulting in reignition
Stern Oil Council Bluffs, IA	21 tanks of oil	2 1/2 hours	AFFF Mil spec foam - 4 1/2 hours	Two airport crash trucks applied foam without success
Lubritalia Tarranto, Italy	Oil	15 minutes	AFFF foam was applied for hours	Four Fire Departments applied foam - ineffective
Tank Fire Demo Shandong, China	Petroleum	58 seconds	7 minutes, 35 seconds	15 times more foam was used
British Petroleum Das Island, England	Crude oil testing	Average: 26.75 seconds	Average: 180.5 seconds	Knockdown was 6.5 times faster using 85% less agent
Goldman Titanium Buffalo, NY	Titanium	20 minutes	Soda Acid meant for metals - ineffective	Foam explodes as plain water hits burning titanium
Barn Fire Madison, IN	Class A materials	Immediate knockdown	CAFS Class A foam was ineffective	Second alarm fire department saved the day with F-500 EA
CTA Acoustics Plant Corbin, KY	Various Class B chemicals	25 minutes	AFFF was applied for 1 1/2 hours - ineffective	F-500 encapsulates Class B fuels making them nonflammable
Industrial Spray Booth Grand Rapids, MI	Various petroleum products	2 minutes	CO_2, dry chemicals, AFFF and water failed	F-500 EA outperforms most agents in most applications
Dominion (Power) Chester, VA	Sprinkler testing -diesel	32 seconds	Water-1 minute, 58 seconds	Testing proved F-500 EA increases effectiveness
Ajax Chubb - Fire Extinguisher Demo	Gasoline	1 second	AFFF - 14 seconds	F-500 EA instantly encapsulates flammable vapors
Car Fire West Thurston, WA	Magnesium, gasoline, brush fire	30 seconds	Water failed	Water can't extinguish magnesium used on newer cars
Underground Fire Hilton Head, SC	Peat	5 hours	Class A & B foams - 8 days - ineffective	Foams used a million gallons of water and failed
Fire Departments Coffey County, KS	40 tires - testing	10 seconds	CAFS applied Class A foam; 2 mins, 12 secs	F-500 EA extinguished tires 13 times faster than foam
Kansas Ethanol Institute Kansas	650-gallons of Ethanol (E190) in a 27-foot diameter pit	50 seconds using 3-gals. of F-500 EA	AR-AFFF -5 minutes, 10 seconds (40-gals. of foam)	AFFF failed to extinguish; AR-AFFF later reignited

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